PELABELAN GRACEFUL SISI PADA GRAFT SAPU DAN GRAF LINGKARANG

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ABSTRAK

Model-model yang ada dalam teori graf berguna untuk aplikasi yang luas, misalnya pada jaringan transportasi, komunikasi dan riset operasi. Beberapa pembahasan dalam teori graf diantaranya pelabelan graceful yang didefinisikan sebagai pemberian label pada titik suatu graf G yang memenuhi fungsi injektif dari himpunan titik ke himpunan bilangan bulat tak negatif $\{0, 1, 2, .., q\}$ dengan q adalah banyaknya sisi di G sedemikian sehingga setiap sisi xy di G mendapat label $|f(x) - f(y)|$, maka label setiap sisi akan berbeda. sedangkan graceful sisi, misal G graf dengan p titik dan q sisi. Graf G dikatakan graceful sisi jika terdapat fungsi bijektif

$f: E(G) \rightarrow \{1, 2, .., q\}$ dan fungsi bijektif $g : V(G) \rightarrow \{0, 1, 2, .., p-1\}$ dengan $g(u) \equiv \sum_{uv \in E(G)} f(uv) (mod\ p)$. Adapun graf yang diteliti adalah graf sapu dan graf lingkaran.

Kata kunci: *graf lingkaran C_n, graf sapu $B_{m,n}$, pelabelan graceful sisi.*

ABSTRACT

In graph theory there are models are useful for more applications, for example on transport networks, communications and operations research. Some of the discussion in graph theory such graceful labeling defined as labeling at the vertices of a graph G that satisfies injective function from the set vertex to the set of non-negative integers $\{0, 1, 2, .., q\}$ such that every edge xy in G labeled

$|f\ (x) - f\ (y)|$, then label each edge will be different. while edge graceful graph G with p points and q edge. G graph is said to be edge graceful if there is a bijective function $f: E\ (G)\ \rightarrow\ \{1, 2, \ldots, q\}$ and bijective function

$g: V\ (G)\ \rightarrow\ \{0,1,2, \ldots, p-1\}$ with $g(u)\ \equiv \sum_{uv \in E(G)} f(uv) (mod\ p)$. Even though the graph that had been researched are broom graph and circle graph.

Keywords: *circle graph, broom graph, labeling edge graceful.*

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